CONTENTS VOLUME 61

Special Issue: Intermediate-Term Earthquakes Prediction: Models, Algorithms, Worldwide Tests
Guest Editor: V.I. Keilis-Borok

Contents vii
Foreword ix
Introduction: Non-linear systems in the problem of earthquake prediction
V.I. Keilis-Borok (Moscow, U.S.S.R.) 1

Part 1 — Models

Deformation of an array of interacting movable elements
V.F. Pisarenko, I.M. Primakov and M.G. Shnirman (Moscow, U.S.S.R.) 8
Block model of earthquake sequence
A.M. Gabrielov, T.A. Levshina and I.M. Rotwain (Moscow, U.S.S.R.) 18
Hierarchical model of defect development and seismicity
G.S. Narkunskaya and M.G. Shnirman (Moscow, U.S.S.R.) 29
Multiscale models of failure and percolation
S.A. Molchanov, V.F. Pisarenko and A. Ya. Reznikova (Moscow, U.S.S.R.) 36
Constructive statistical cracks mechanics
V.M. Gertzik (Moscow, U.S.S.R.) 44

Part 2 — Prediction: algorithms and data analysis

Diagnosis of Time of Increased Probability of strong earthquakes in different regions of the world: algorithm CN
V.I. Keilis-Borok and I.M. Rotwain (Moscow, U.S.S.R.) 57
Premonitory activation of earthquake flow: algorithm M8
V.I. Keilis-Borok and V.G. Kossobokov (Moscow, U.S.S.R.) 73
Strategies in strong earthquake prediction
G.M. Molchan (Moscow, U.S.S.R.) 84
Dynamics of the magnitude–frequency relation for foreshocks
G.M. Molchan and O.E. Dmitrieva (Moscow, U.S.S.R.) 99
Formal definition of premonitory seismic quiescence
S.Yu. Schreider (Moscow, U.S.S.R.) 113
Statistical analysis of the results of earthquake prediction, based on bursts of aftershocks
G.M. Molchan, O.E. Dmitrieva, I.M. Rotwain and J. Dewey (Moscow, U.S.S.R.) 128

Rapid Communication
Reduction of territorial uncertainty of earthquake forecasting
V.G. Kossobokov, V.I. Keilis-Borok (Moscow, U.S.S.R.) and S.W. Smith (Seattle, WA, U.S.A.) . . R1

Research Papers

Earthquakes and the spectrum of the Brussels Superconducting Gravimeter data for 1982–1986
L. Mansinha (London, Ont., Canada), D.E. Smylie (North York, Ont., Canada) and B. Sutherland (Kingston, Ont., Canada) 141

Statistical analysis of the geomagnetic reversal sequences
W. Marzocchi and F. Mulargia (Bologna, Italy) 149

A theoretical study of induction by an electrojet over a coastline for Sq and substorm periods
A.K. Agarwal and J.T. Weaver (Victoria, B.C., Canada) 165

In search of a systematics for the viscosity of perovskites: creep of potassium tantalate and niobate
S. Beauchesne and J.P. Poirier (Paris, France) 182

Mapping of P-wave slab anomalies beneath the Tonga, Kermadec and New Hebrides arcs
H.-W. Zhou (Pasadena, CA, U.S.A.) 199

Paleomagnetic record from glacial varves in Alto Río Mayo, Patagonia, Argentina
C.A. Sylwan (Stockholm, Sweden) and L.A. Beraza (Buenos Aires, Argentina) 230

Evidence for the splitting of shear waves from waveform and focal mechanism analyses
S. Kaneshima (Tokyo, Japan), N. Maeda (Yokosuka, Japan) and M. Ando (Kyoto, Japan) 238

Regional variations in subsidence rate of lithospheric plates: implication for thermal cooling models
B. Lago, A. Cazenave and J.-C. Marty (Toulouse, France) 253

Effects of H_2O on elastic wave velocities in ultrabasic rocks at 900 °C under 1 GPa
K. Ito (Osaka, Japan) 260

Earthquake source processes and subduction regime in the Santa Cruz Islands region
F. Tajima (Austin, TX, U.S.A.), L.J. Ruff (Ann Arbor, MI, U.S.A.), H. Kanamori, J. Zhang (Pasadena, CA, U.S.A.) and K. Mogi (Tokyo, Japan) 269

Lithospheric deformation beneath the Himalayan region
R.P. Singh (Kanpur, India), Q. Li and E. Nyland (Edmonton, Alb., Canada) 291

Palaeomagnetism of a Caledonian ophiolite complex, Karmøy, southwest Norway
T.J. Poppleton and J.D.A. Piper (Liverpool, U.K.) 297

Chlorite control of correlations between strain and anisotropy of magnetic susceptibility
B.A. Housen and B.A. van der Pluijm (Ann Arbor, MI, U.S.A.) 315

Book reviews

Drifting Continents and Shifting Theories by H.E. LeGrand—K.M. Storetvedt 324

High Pressure Investigations in Geosciences by H. Stiller (Editor)—L-G. Liu 325

Soil Physics by T.J. Marshall and J.W. Holmes (Editors)—D.A. Rose 325

Contents of Volume 61 327